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Angus Campbell

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INDIANAPOLIS, IN 46204

EXAMINER

HOBBS, MICHAEL L

ART UNIT

PAPER NUMBER

1797

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DELIVERY MODE

03/19/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/529,855	Applicant(s) CAMPBELL, ANGUS	
	Examiner MICHAEL HOBBS	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 66-71, 73-90 and 92-152 is/are pending in the application.
- 4a) Of the above claim(s) 106-152 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 66-71, 73-80-90 and 92-105 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's amendment filed on 10/3/2009 and 12/17/2009 has been considered and entered for the record. Applicant's amendment from 12/17/2009 overcomes the objection to the specification in paragraph 3 and the 35 USC 112 second paragraph rejection in paragraph 5 of the Office Action mailed on 06/20/2008.
2. Claims 106-152 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.
3. Claims 66-90 and 92-105 are pending further examination upon the merits.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 66-71, 73-90 and 92-105 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claim contains the term "exothermic" which is not supported by the original disclosure and therefore constitutes new matter.
6. Appropriate corrective action is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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10. Claims 66, 68, 72, 73, 75, 81, 85, 89, 93-96, 102, 104 and 105 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchida (US 5,534,042) in view of Gruendler (US 3,554,454).

11. For claim 66, Tsuchida teaches an apparatus for forming compost that includes a tank or enclosed vessel (1) with a rotatory vane (3) that has a shaft and is used to "grind" the compost material within the tank (col. 3 lines 8-13). The rotary vane is driven by a motor (5) with a lid (2) that is used to load the compost into the container and is fully capable of allowing the compost in the second zone be removed from the tank (col. 3 lines 25-29). Air or oxygen is sent into the tank by a ventilation control valve (20, col. 3 lines 13-17). Furthermore, the blades effectively divide the tank into two sections and the blades of Tsuchida are fully capable of functioning as a "size reduction means" since the purpose of the blades is to grind the compost within the tank. Finally, the blades of Tsuchida are being interpreted as being cantilevered or attached at one end as is depicted within the figure. However, Tsuchida is silent regarding blades or bars extending from the sidewall.

12. Gruendler discloses a shredder and separator for blending, classifying and reducing composted refuse. For claim 66, Gruendler discloses a plurality of abutting shredder bars (bars 40, 56 & 58) that break up the compost to a more uniform size (col. 1 lines 67-70; col. 2 lines 20-22). The bars allow for the continual shredding of the compost as it travels through the refuse unit of Gruendler. Furthermore, one of ordinary skill in the art would be aware that the addition of the shredder bars as disclosed by Gruendler would assist in the grinding up of compost. Therefore, it would have been

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obvious to one of ordinary skill in the art to employ the shredder bars as suggested by Grundler within the composter of Tsuchida in order to obtain the predictable result of shredding and grinding the compost a uniform consistency.

13. For claim 68, Tsuchida discloses that the walls are insulated (8) and for claim 72 that rotary vane (3) or grinding means includes more than one blade. For claim 81, the loading port or lid (2) is located at the top of the tank and for claim 85 the shaft for the rotatable vane (3) is located in the center of the tank (Fig. 1). With regards to claim 89, the cutting blades of Tsuchida are fully capable of promoting even and consistent flow of materials through the composter. With regards to claim 93, the rotary vane clips the garbage (21) or compost from the inner side wall of the tank and moves the garbage toward the central axis of the tank (col. 6 lines 31-34) and for claim 94, while Tsuchida is silent regarding the direction of rotation of the blades, the blades are fully capable of rotating in either a clockwise or counter-clockwise position. For claims 95 and 96, the lid (2) can be sealed in an airtight manner (col. 6 lines 12-14) and for claim 102 the oxygen or air enters through ventilation control valve (20). For claim 104, the tank includes an exhaust ejector (14) for ventilating gas from the interior of the tank.

Furthermore, the gas from the exhaust ejector (14) is sent to a deodorization tank (12) for eliminating offensive odors (col. 6 lines 65-67, col. 7 lines 13-18).

14. Regarding claims 73 and 75, Gruendler meets the limitation of the bars extending from the side of the tank and having a bar rotate past the grinding bars and the bars have a plurality of teeth or edges as shown in Figure 3. This would be obvious to one of ordinary skill in the art using the reasoning from claim 66.

15. Claim 67 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchida (US 5,534,042) in view of Gruendler (US 3,554,454) and in further view of Suzuki et al. (US 2002/0096459 A1).

16. Tsuchida is silent regarding the container being stainless steel or another corrosion resistant material.

17. Suzuki teaches a garbage treatment vessel where the garbage is stored within the vessel and agitated by a propeller unit. For claim 67, Suzuki teaches that the container is made of stainless steel ([0016]). The corrosion resistant properties of stainless steel are known within the art hence the use of stainless steel in food grade containers and for chemical storage. Further, it would be obvious to one of ordinary skill in the art to employ a stainless steel container as suggested by Suzuki in order to prevent corrosion within the container of Tsuchida and Gruendler.

18. Claims 69-71 and 97 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchida (US 5,534,042) in view of Gruendler (US 3,554,454) and in further view of Chen et al. (US 2002/0090718 A1).

19. Tsuchida teaches a composter that can hold up to 2300 kg of garbage, but does not specify the volume of the container.

20. Chen teaches a composting and homogenizing organic material. For claims 69-71, Chen teaches a small to medium composter with a volume of 200 - 4000 liters which is the equivalent of 0.2 - 4 m³ ([0019]). This range anticipates the volumes for the

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composter being less than 8 m³, having a range of 1.5 m³ to 5.0 m³ and a range of 2.0 m³ to 3.0 m³. The sizing of the composter depends on the amount of raw material to be composted and expected throughputs of material. It would be obvious to one of ordinary skill in the art to employ the volumes suggested by Chen in order to have a composter with enough volume for the garbage of Tsuchida. The suggestion for doing so at the time would have been to modify the volume of the composter based on consumer demand ([0049]).

21. For claim 97, Chen discloses a stage of the reaction using a mesophilic strain of microorganisms ([0003]) and a stage using a thermophilic strain of microorganisms ([0004]). The conditions within the composter are controlled to facilitate waste stabilization at a particular moisture and aeration ([0002]). While not specifying that an oxygen source is controlled, Chen implies that a controlled amount of oxygen is sent to the microorganisms in order to create stable conditions for each strain. Therefore, it would be obvious to one of ordinary skill in the art to employ the mesophilic and thermophilic stages as suggested by Chen in order to decompose the garbage of Tsuchida and Gruendler. The suggestion for doing so at the time would have been in order to consume readily degradable substances within the garbage ([0004]).

22. Claims 83, 90, 92, 99, 100 and 101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchida (US 5,534,042) in view of Gruendler (US 3,554,454) and in further view of Goldfarb (US 5,258,306).

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23. For claim 83, Tsuchida and Gruendler are silent regarding a discharge at the bottom of the container. Goldfarb teaches for claim 83 an exit well (27) at the bottom of the composter for removing material from the interior of the device. The use of a bottom discharge allows a bin or other container to be placed at the bottom of the composter for collecting and transporting the compost. Therefore, it would be obvious to one of ordinary skill in the art to employ the exit well as suggested by Goldfarb in order to remove compost from the interior of the composter of Tsuchida.

24. With regard to claim 90, Goldfarb teaches an agitator arm assembly (4) near the top of the container that is fully capable of assisting in the loading of materials into the composter. The use of a topmost agitator would be obvious to one of ordinary skill in the art to employ as suggested by Goldfarb in order to mix and initially grind the garbage of Tsuchida and Gruendler.

25. For claim 92, Goldfarb discloses an exit well (27) with a sweep paddle that "guides" the compost to the exit well. The use of a sweep paddle or guide would be obvious to one of ordinary skill in the art to employ the sweep paddle as suggested by Goldfarb in order to move the already composted garbage of Tsuchida and Gruendler out of the composter. The suggestion for doing so at the time would have been in order to remove a measured quantity of compost (col. 6 lines 63-65).

26. Tsuchida and Gruendler are silent regarding supplying compressed air to the composter.

27. For claim 99, Goldfarb teaches air is supplied to the system by compressed air or outside fan blowers (col. 4 lines 56-59). It would be within the skills of one of ordinary

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skill in the art to employ an air compressor as the air supply instead of fans. For claim 100, the sensors of Goldfarb monitor the temperature, moisture and air flow through the composter by being connected to a computer (col. 5 lines 24-26). Furthermore, the computer is fully capable of controlling the air flow to induce biological activity or remove excess heat from the composter. Therefore, it would be obvious to one of ordinary skill in the art to employ a source of forced air as suggested by Goldfarb in order to supply air to the composter of Tsuchida and Gruendler. The suggestion for doing so at the time would have been in order to regulate and control the fermentation process.

28. With regards to claim 101, both Tsuchida, Gruendler and Goldfarb are silent regarding the exact placement (range) of the temperature sensor above the lower end of the composter. However, monitoring the temperature of the compost within the device is known within the art and using multiple sensors throughout the composter to monitor the temperature gradient within the composter is also known within the art (refer to Ueda below). Therefore, it would be obvious to one of ordinary skill in the art to place the temperature sensor close to the bottom of the composter of Tsuchida, Gruendler and Goldfarb in order to monitor and control the temperature of the compost. Refer to § MPEP 2144.04 VI C.

29. Claims 80, 82 and 84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchida (US 5,534,042) in view of Gruendler (US 3,554,454) and in further view of Ueda (US 6,702,210 B1).

30. Tsuchida is silent regarding a discharge on the bottom wall of the composter.

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31. Ueda teaches a garbage disposing unit that includes internal blades for the mixing and grinding of garbage. With regards to claim 80, Ueda teaches that a raw garbage entrance (10e) that has a cover (10d) which is adjacent to the sidewall of the composter (10a). For claim 82, a discharge port (19) is located at the bottom side wall (10b) for the removal of compost. The use of a top lid and a bottom discharge allows for the continuous addition and removal of garbage from the composter. Therefore, it would be obvious to one of ordinary skill in the art to employ the loading lid and discharge port as suggested by Ueda in order to simultaneously load and remove compost from the device of Tsuchida and Gruendler.

32. For claim 84, Tsuchida teaches a rotating shaft (12) that passes vertically through the tank (col. 3 lines 59-61). The use of a vertical shaft that runs the length of the composter would allow a skilled artisan to place multiple blades or rods at spaced intervals within the device. Therefore, it would be obvious to one of ordinary skill in the art to employ the vertical shaft as suggested by Ueda in order to place multiple sets of blades within the composter of Tsuchida. The suggestion for doing so at the time would have been in order to support the shaft with the attached blades (col. 1 lines 61-62).

33. Tsuchida and Gruendler are silent regarding temperature sensors.

34. With regards to claim 98, Ueda teaches multiple temperature sensors (16) within the interior of the composter. The use of multiple temperature sensors placed throughout the composter would allow the skilled artisan to monitor the temperature at different levels within the composter and make adjustments as needed in order to maintain the temperature at a specific set-point. Therefore, it would be obvious to one

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of ordinary skill in the art to employ the sensors as suggested by Ueda in order to monitor the temperature within the composter of Tsuchida and Gruendler. The suggestion for doing so at the time of the invention would have been in order to control the rate of fermentation within the tank.

35. Claims 86-88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchida (US 5,534,042) in view of Gruendler (US 3,554,454) and in further view of Vanderwal (US 6,139,793).

36. Tsuchida is silent regarding the shaft speed within the composter.

37. Vanderwal teaches a waste treatment control system that includes a pressure vessel with a rotating shaft. For claims 86 and 87, Vanderwal teaches that the rpm speed of the shaft (20) is from about 5 to 50 rpm which reads on the shaft speed being less than 60 rpm and within the range of 10 to 30 rpm (col. 4 lines 59-61). Therefore, it would be obvious to one of ordinary skill in the art to employ the shaft speed of Vanderwal in order to properly mix and grind the garbage of Tsuchida and Gruendler. The suggestion for doing so at the time would have been to allow portions of the waste to contact the walls of the vessel in order to heat the garbage in a substantially uniform manner (col. 4 lines 61-63).

38. With regards to claim 88, Tsuchida teaches a motor, but is silent regarding whether that motor is electric or hydraulic.

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39. For claim 88, Vanderwal teaches that the motor is an electric motor (122). However, Vanderwal is silent regarding the motor being hydraulic. Further, it would be obvious to one of ordinary skill in the art to use the electric motor as suggested by Vanderwal in order to rotate the central shaft of Tsuchida and Gruendler.

40. Claim 103 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchida et al. (US 5,534,042) in view of Gruendler (US 3,554,454) and in further view of Greeb (US 5,234,596).

41. For claim 103, Tsuchida teaches a pulsator (4) at the bottom of the tank around the shaft of the rotary vane that assists in mixing the garbage within the composter. Tsuchida and Gruendler are silent regarding injecting air from the bottom of the container.

42. Greeb teaches a device for composting organic material where that material is fed into the top of the composter and discharged from a bottom port. For claim 103, Greeb teaches an air-distributing device at the bottom of the device for aeration of the compost. The air flow counter-currently through the debris mixing and aerating the compost (col. 3 lines 23-26). It would be obvious to one of ordinary skill in the art to employ the air-distributing device as suggested by Greeb in order to aerate and mix the compost of Tsuchida and Gruendler. The suggestion for doing so at the time would have been in order to supply air for the composting of the raw garbage within the device.

Response to Arguments

43. Applicant's arguments with respect to claims 66-71, 73-90 and 92-105 have been considered but are moot in view of the new ground(s) of rejection. The new grounds of rejection is in view of Gruendler (US 3,554,454) which discloses bars extending from the sidewall of the composter in order to shred the compost as it travels through the composter through the loading part to the discharge port.

44. With regards to Applicant's argument on page 16 paragraph 2 that Tsuchida does not disclose an aerobic, exothermic composting process, the Examiner respectfully disagrees with this assertion. First, Tsuchida discloses an aerobic fermentation that includes an air or oxygen source. Second, the tank is fully capable of holding an exothermic source and the type of composting performed in the tank is material worked upon by an apparatus (see MPEP 2115) and does not structurally define the claimed invention over the prior art.

45. Also, regarding Applicant's argument on page 16 paragraph 4, the deficiency of Tsuchida regarding the fixed blades, bars or paddles and the cantilevered bars are on page 17 paragraph 2 is cured by the applied reference of Gruendler.

46. With regards to Applicant's argument on page 17 that to summarize the argument, none of the applied references disclose the apparatus as claimed in amended claim 66. The Examiner respectfully disagrees. With regards to the "size reduction means for reducing the size of the waste material", the blades of Tsuchida effectively divide the composter into two zones. Further, the blade is a "size reduction means" since the whole purpose of the blade is to reduce the size of the compost to a

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rice-like porridge consistency which, reads on reducing the size of the waste material.

Also, since the waste has to "travel" from the top of the tank to the blade port, the waste passes through this size reduction zone and since the blades are attached onto a rotating shaft, this reads on the blades being "cantilevered". With regards to the sidewall blades, this limitation is disclosed by Gruendler which discloses shredding bars attached to and extending from the sidewall. The addition of blades/bars extending from the sidewall to assist in the grinding of the compost would have been known to one of ordinary skill in the art at the time of the invention based on the disclosure of Gruendler and adding this to Tsuchida would yield predictable results.

47. Regarding Applicant's Supplemental response filed on 03/10/2009, the Examiner does not find the Applicant's argument persuasive since the type of process in the composter constitutes material worked upon by an apparatus and therefore, does not provide a structural limitation that distinguishes the claimed invention over the prior art of record.

Conclusion

48. Claims 66-71, 73-90 and 92-105 are rejected.

49. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL HOBBS whose telephone number is (571)270-3724. The examiner can normally be reached on Monday-Thursday 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/M. H./
Examiner, Art Unit 1797

/Jill Warden/
Supervisory Patent Examiner, Art Unit 1797